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ABSTRACT

The purposes of this paper are to examine more intensively than was attempted in the authors' first paper (not available through ERIC) a subset of the parent-child studies published in Child Development and Journal of Marriage and the Family for evidence of qualitative differences in the methodological approaches used in the two journals, and to draw some implications from these results and those presented in the first paper for the task of integrating the research of child and family investigators. Two time periods were selected for examination: 1959-1962 and 1974-1976. The first time period represents the "heyday" of parent-child relations research by child researchers. The second time period is representative of current research efforts by both professional groups, and provides a sufficient time lapse from the earlier period to reflect the emerging trends in the two journals. Each journal had 17 articles randomly selected during each of the time periods. Each article was subjected to seven analyses to determine the kind of statistical analysis done and the methodology used. Significant differences were found between the child and family researchers. (Author)

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An Intensive Analysis and Discussion of Methodological Approaches to the Study of Parent-Child Relationships

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By Child Development and Family Researchers[1]

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The purposes of the present paper are two-fold: 1) to examine more intensively than was attempted in our first paper a subset of the parent-child studie published in Child Development (CD) and Journal of Marriage and the Family (JMF) for evidence of qualitative differences in the methodological approaches used in the two journals; and 2) to draw some implications from these results and those presented in the first paper for the task of integrating the research of child and family investigatiors. A bit of caution is also warranted at this point. It could be argued, and rightly so, that any differences that are revealed between child and family researchers could be the result of different types of conceptual issues that the two groups of researchers address. While we have tried to avoid this possible confound by only examining a substantive area that both groups of researchers share an interest in, the fact remains that until an analysis of the comparability of the conceptual questions addressed by both groups of researchers is undertaken, a plausible confound may exist.

With regards to the intensive analysis, two time periods were selected for examination--the period from 1959-1962, and the period from 1974-1976. As indicated in our first paper, the 1959-62 time period represents the "heyday" of parent-child relations research by child researchers. It was during this 4-year period that developmentalists published more parent-child relations researc than they had in the preceeding 28 years. The second time period was selected because it is representative of current research efforts by both professional groups and provides a sufficient time lapse from the earlier period to reflect the emerging trends in the two journals.

Procedures

Seventeen articles were selected randomly from each journal during each of the two aforementioned time periods. The one restriction placed on this randomization process was that an equal number of articles were sampled from each of th years within each time span.

Each article was subjected to three analyses in an attempt to answer the following three questions: 1) do the investigators assume a single causal model or a multiple-interaction causal model in analyzing their data 2) are the researchers drawing conclusions from their results without performing significanc tests?; and 3) how much variance in the dependent measures were the investigators able to account for by the measures they conceived as the independent variables?

The first analysis consisted of tallying the number of studies from each tim period and between each journal that examined the joint influence (interaction) o two or more independent variables on a given dependent (criterion) measure. Multiple regression analyses, contingency tables that examined the influence of multiple parameters on the distribution of subjects, and interactions from an

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analysis of variance are all examples of analytic techniques that were tallied as reflecting the use of a multiple-interaction causal model by the investigators It was hoped that this analysis would serve as an adequate proxy for determining the extent to which the two disciplines have come to grips with the complexity which the natural ecology imposes on family processes.

The second analysis sought to determine whether the investigators were drawing conclusions from their data without having performed any or all of the significant tests on the data to confirm the stability of the obtained differences. Consider the following hypothetical example: A researcher states that mothers are more nurturant than fathers with their daughters, but does not subject the data that served as the basis for the statement to a statistical test

The third analysis involved computing the average amount of variance accounted for by the statistically significant effects obtained from a given analytic procedure used in each study. The mean amount of variance accounted for by the significant effects resulting from a given statistical procedure provided the basic data unit for this analysis. The third analysis was intended to reflect the distinction between statistically significant findings which are indexing only the minor influence or association of one variable to the criterion measure from those which are revealing a powerful influence of one variable on a criterion measure. Since one of the major goals of the scientific enterprise is to account for as much variance as possible, it was deemed important to evaluate how much variance the statistically significant findings in the two sets of studi actually accounted for over time.

Four additional analyses were performed on all of the articles from within the two time periods. These analyses, similar to the time series material presented at the end of the first paper, were initiated in the hope that they wou allow us to paint a more precise picture of the qualitative methodological change over time both within and between each journal. More specifically, the following parameters were examined: 1) the percentage of parent-child relation studies at each time period that employed observational methodology, 2) the percentage of parent-child relation studies at each time period that employed an experimental approach, 3) the percentage of parent-child relations studies at each time period that they employed the interview/questionnaire approach and 4) the percentage of parent-child relations studies across time that employed an additional research approach when questionnaires or interviews were used. Although the aforementione analyses obviously do not exhaust all of the potential analyses which could have been conducted, they do shed some light (would you believe a little glimmer) on changes in the quality, complexity, and methodological approaches to the study of parent-child relations by two different disciplines.

Results

First both journals rarely examined the joint influence of two or more parameters during the 1959-1962 time period. However, by 1974-76, the joint impact of two or more parameters on a criterion or dependent measure were investigated in significantly more of the CD studies than the JMF studies, $z = 2.12$, $p < .05$.

Our second intensive analysis tabulated the number of data analyses that should have been executed but were not at each time period and across both time periods. No significant differences between the journals were detected in the number of incomplete analyses in the 1959-1962 analysis period. However, parent-child relations articles in JMF contained more incomplete data analyses during

the 1974-76 time period $X^2(1) = 6.94$, $p < .01$ and across both time periods $X^2(1) = 9.46$, $p < .01$ than articles published in CD.

Third, statistically significant effects in CD accounted for more variance than those found in JMF. The mean amount of variance accounted for per significant effect were 29.5% and 12.1% respectively $t(37) = 3.29$, $p < .01$. The data for this analysis was collapsed across both time periods in order to provide a sufficient number of studies for comparison since less than one-half of the results which appeared in JMF provided sufficient statistical information in order to calculate the variance accounted for in the study. For example, on several occasions either the type of data analytic technique was not reported and only a p value would be presented, or other important adjunct information such as the number of degrees of freedom would be omitted. In all, 60% of the sampled JMF articles omitted information, while 26% of the CD articles omitted data analysis information.

Now, let us consider the data that were drawn from our larger time-series analysis. The results revealed that during the 1959-1962 time period articles in CD used observational methodologies more often than articles in JMF ($z = 4.25$, $p < .01$). Conversely, articles in JMF used the questionnaire/interview approach more often ($z = 4.14$, $p < .01$). When the questionnaire/interview approach was the only data gathering technique employed, articles in CD more often employed other data gathering approaches in conjunction with the interviews or questionnaires than did articles in JMF ($z = 2.14$, $p < .05$).

Further, the pattern of results for the 1974-1976 time period are similar to the pattern of results for the first time period, only more pronounced. Specifically, articles in CD used the observational methodology ($z = 9.14$, $p < .001$), and experimental approach more often than articles in JMF ($z = 9.28$, $p < .001$). Once again, articles in JMF used only a questionnaire or interview more often than articles in CD ($z = 9.35$, $p < .001$), while articles in CD were more likely to accompany questionnaires or interviews with other data assessment techniques ($z = 9.27$, $p < .001$).

Discussion

Based upon the results of both the intensive and time series analyses we can begin to sketch a profile of some qualitative differences in the way child and family researchers confront the study of parent-child relations. The modal approach by family investigators involves the administration of a questionnaire to college age subjects. The investigations are consistently descriptive rather than experimental in nature, and the questionnaires are rarely accompanied by a different type of assessment strategy. The influence of one independent variable at a time rather than the combined influence of two or more independent variables on a dependent or criterion measure are investigated. When we examine the handling of the data once it is obtained, we discovered that the data is often not completely analyzed and those effects that are revealed account for only approximately 12% of the variance.

In contrast to family research on parent-child relations, research on parent-child relations by child developmentalists has qualitatively changed over the years. Prior to the middle sixties questions regarding parent-child relations were primarily investigated with questionnaires, although even then some investigators were employing observational techniques. Moreover, few

investigations were using the experimental approach or examining the influence of more than one independent variable on a dependent variable. This modal research pattern underwent a dramatic change as researchers turned to observational methodologies and to a less degree the experimental approach. The influence of multiple independent variables is now the rule. Across time complete data analysis has been the rule rather than the exception, and the average amount of variance accounted for per significant effect approached 30%.

If we take a moment to reflect on what all of the data that you have been bombarded with means, one could conclude that, yes, qualitative differences do exist in the complexity, methodology, and to some extent the quality of parent-child relations research by child and family specialists. However, these differences have not always been as pronounced as they are today as the methodological approaches in the late fifties and early sixties were at least somewhat similar. Why have the two disciplines grown steadily apart? What events or philosophical differences are responsible for this drift and do they mitigate against the integration of the two disciplines?

The fact of the matter is, developmental researchers no longer believe that adequate information about parent-child relations can be solely or primarily obtained through interviews and questionnaires. Several orthogonal but converging pieces of information have led child researchers to this conclusion. For example, there is little evidence that parents relate to their children as they report they do on questionnaires or interviews. Rather, the available data suggests there is little convergence between parental self-reports and actual parental behavior (Becker & Krug, 1965; Brody, 1965; Lytton, 1971; Yarrow, 1963). Further, social and personality psychologists have also demonstrated that people often behave in a manner that is discrepant from their own self-reports (Mischel, 1968).

Perhaps the straw that broke the camel's back for the use of self-report measures by child devleopmentalists was the inability of Yarrow, Campbell, and Burton (1968) to replicate the findings of the classic Sears, Maccoby, and Levin (1957) investigation. Despite the fact that these researchers went to great lengths to select samples that were almost identical to the Sears, et al. sample, and used many of the same questionnaire and interview items, they could not replicate the results. The fallout from all of these sources of inquiry has resulted in child researchers questioning the value of only obtaining information about parent-child relationships from questionnaires or interviews.

The crux of this philosophical difference is that child developmentalists now believe that developmental processes should be approximated as closely as possible when they are empirically investigated. The source of this belief can be traced to an implicit assumption that subjects have to be psychologically committed to the variable under investigation. In other words, the research subject, whether it be an adult or child, must get involved so that the form of their behavior bears some resemblance to their behavior as it might occur on a day-to-day basis. In fact, some psychologists have suggested that a continuum of a research subject's commitment can be constructed (Aronson & Carlsmith, 1968). At one extreme of the continuum would be paper-and-pencil measures where subjects report on what they have done or would do in a given situation. The amount of commitment on this type of measure is undoubtedly influenced by the situation in which the questionnaire is administered. If the administration takes place in a large auditorium with several hundred students, as is the case in many of the JMF articles, the amount of commitment on the

subjects' part is probably less than a self-report measure that is individually administered. For this reason, interviews probably psychologically involve a respondent more than a questionnaire due to the interviewer's presence. The well-trained interviewer can succeed in inducing the subject to pay heed, and therefore stands a better chance of at least getting a serious response.

The third step on this continuum is what are termed behavioroid measures. These are measures of a subjects' commitment to perform a piece of behavior, without actually performing it. The use of behavioroid techniques are found most often in social psychological experiments where the subject intention is the researchers focus; however, its applicability is not immediately obvious for parent-child relation research. Again, the crucial difference between a questionnaire and a behavioroid measure is the degree of commitment. Most subjects who volunteer for an activity have an intention of following through. It is much easier and, therefore, much less meaningful to check a questionnaire to indicate that you would volunteer if the occasion arose.

Finally, the measurement of actual behavior would be expected to elicit the largest degree of psychological commitment or involvement by the subject in the measurement process in natural or artificial settings. By actually assessing interaction patterns the researcher is approximating the natural environment in which adults and children provide each other with continual feedback. The absence of this feedback component in self-report indices probably is partially responsible for the lack of correspondence between self-reports of child-rearing behavior and actual child-rearing behavior. The benefits of measuring actual interactions has paid off in that at least to the degree that the investigations of parent-child relations which have used this approach are generally replicated. This has allowed researchers to engage in systematic research programs rather than in "one shot" studies where the results from one study are not followed up in a series of subsequent studies (e.g., Rheingold & Echerman, 1970).

Due to their preference for the observational technique, investigations of parent-child relationships by child specialists are increasingly becoming what we term "expensive." By expensive we mean that the amount of effort in terms of the investigator's hours, subjects' hours, and monetary expense is great. To undertake an in vivo investigation requires that parents and children usually must donate at least an hour of their time. Observational systems must be developed and several observers have to be trained to make reliable observations. From our experiences, perhaps 200 person hours by the investigators are required just to develop a system, make it reliable, and collect the data from 50 mother-child dyads. Recruitment of subjects, as well as data reduction and analysis are not included in this estimate. However, an increasing number of child researchers now believe that the results that one obtains from such investigations justify the costs.

As many of you are well aware, child researchers do not have a reputation for engaging in such expensive research pursuits. The old stereotype of a child psychological experiment, whether it concerned parent-child relations or more often some other aspect of development, was to escort the child to a laboratory and provide him or her with an experimental task that consumed no more than ten to fifteen minutes in the presence of a strange experimenter. Unfortunately, these results seldom provided the discipline with the breadth of information that is necessary to understand developmental processes at least in their social context. In a similar view, we must question whether family specialists are gaining the information they need in their attempt to understand parent-child

relations by relying only on information obtained from questionnaires or interviews. Just as child researchers are attempting to shake their narrow approaches in favor of multiple method approaches to many developmental issues, there is no reason why family researchers could not follow suit.

The pressures on child researchers to engage in more expensive research are certainly increasing. In the area of parent-child relations research we are witnessing an increased emphasis on making repeated measurements of the parent-child subjects across time. I am confident that in the near future one shot assessments of parent-child relations will be summarily rejected by the editorial board of CD. A person whose research has exemplified this trend and who is also the current editor of CD, E. Mavis Hetherington, has stated in a recent editorial that the journal will give priority to articles that contain multiple rather than single investigations (1977). It is obvious that pressures from within the discipline are responsible for the growing expense and quality of parent-child relations research.

Our objective in this discussion has not been to portray interview or questionnaire research as an exercise in futility. On the contrary, our purpose has been to point out the limitations of these approaches in the study of parent-child relations particularly when they are the sole source of information. There are many research endeavors where questionnaires or interviews are not only informative, but they are the preferred data gathering strategy. This is especial true for investigations in which observations are not appropriate. For example, several of our colleagues have a large project in which they are attempting to isolate several factors which are related to adolescent pregnancy. We would hate to think of the ethics involved in studying some aspects of this problem with the observational approach. In general, we believe it was appropriate to begin our studies of parent-child relations research in the 50's with self-report measures. However, we are past a beginning, and we need to advance our knowledge in the area through the observation of actual parent-child interactions.

What does all of this mean for those of us who work in interdisciplinary settings? One implication is that the child and family disciplines will only integrate if researchers from within both disciplines adopt multi-method research approaches. Not only would the quality of research questions are derived.

Second, a necessary prerequisite for the integration of the two disciplines would be a reformulation of the way in which graduate students are trained. Students would have to have a firm foundation and especially experience in both survey and observational methodologies. Frankly, if integration does not occur at the level of graduate training it probably will not occur at all. Child and family researchers who are, shall I say, "on the job" will not in most cases have either the time or inclination to learn the subject matter necessary to make interdisciplinary research a reality.

What are the consequences of not integrating the two disciplines, especially on parent-child relations research? Nothing, except that the two disciplines would continue to drift further and further apart. The graduate students of these programs would perpetuate the disciplines as they are now evolving until universities begin to ask why these "interdisciplinary" programs exist.

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